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Application No. National Phase of PCT/EP2005/000084

Docket No.: 13156-00061-US1

### Amendments to the Claims

1. (Previously presented) A process for the distillation of ionic liquids, which comprises the following steps:

setting a pressure which is not higher than ambient pressure, and  
heating to a temperature from 60°C to 350°C.

2. (Previously presented) The process according to claim 1, wherein cations, anions and uncharged molecules are present in equilibrium in the ionic liquid.

3. (Previously Presented) The process according to claim 2, wherein the cations, anions and uncharged molecules are formed by protonation or alkylation of the anions by the cations.

4. (Previously presented) The process according to claim 1, wherein the pressure is less than 200 mbar.

5. (Previously presented) The process according to claim 1, wherein the pressure is less than 50 mbar.

6. (Previously presented) The process according to claim 1, wherein the pressure is less than 5 mbar.

7. (Previously presented) The process according to claim 1, wherein the temperature is from 100°C to 350°C.

8. (Previously presented) The process according to claim 1, wherein the temperature is from 150 to 350°C.

9. (Previously presented) The process according to claim 1, wherein at least two uncharged molecules are formed in the process, and at least two of the uncharged molecules are distilled off.

10. (Previously presented) The process according to claim 9, wherein the at least two of the uncharged molecules which have been distilled off are recombined again to form an ionic liquid.

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11. (Previously presented) The process according to claim 9, wherein one of the two uncharged molecules which have been distilled off is used to prepare an ionic liquid.
12. (Previously presented) Method for the purification of ionic liquids using the process according to claim 1.
13. (Previously presented) Method for the recirculation of ionic liquids using the process according to claim 1.
14. (Previously presented) The process according to claim 3, wherein the pressure is less than 50 mbar.
15. (Previously presented) The process according to claim 3, wherein the more volatile of the uncharged molecules that is distilled off is used to prepare an ionic liquid.
16. (Previously presented) The process according to claim 1, wherein uncharged molecules are formed by protonation or alkylation of the anions by the cations.
17. (Previously presented) The process according to claim 16, wherein the more volatile molecule of the uncharged molecules is distilled off and is used to prepare an ionic liquid.
18. (Previously presented) The process according to claim 17, wherein the pressure is less than 50 mbar and the temperature from 100°C to 350°C.
19. (New) The process according to claim 2, wherein uncharged molecules are formed in the process and at least the more volatile of the uncharged molecules are distilled off.